APPENDIX A

Upload time comparison chart

MPEG 1Video	Data Capacity	MPEG 2 Video
60 min	0.50 GB	17 min
120 min	1.00 GB	34 min
180 min	1.50 GB	51 min
240 min	2.00 GB	69 min
420 min	3.50 GB	120 min

Upload Speed	Net Upload Speed (13% overhead and 1 byte=8 bits)	Upload Time for 1GB (2 hours MPEG 1 or 34 min MPEG 2)	Upload Time for 2GB (4 hours MPEG 1 or 69 min MPEG 2)	Upload Time for 2GB (7 hours MPEG 1 or 2 hours MPEG 2)
125 kbps	13.83 kBytesps	20.09 hours	40.18 hours	60.27 hours
250 kbps	27.65 kBytesps	10.04 hours	20.09 hours	30.13 hours
512 kbps	56.64 kBytesps	4.90 hours	9.81 hours	14.71 hours
1,000 kbps	110.62 kBytesps	2.51 hours	5.02 hours	7.53 hours
2,000 kbps	221.24 kBytesps	1.26 hours	2.51 hours	3.77 hours

Download/Upload Comparison Chart

One GB file download/upload comparison for various services and transfer rates. Rates are based on current service offerings by providers (e.g., Qwest) as well as information from dslreports.com.

Type	Description	Downstream (bps)	Upstream (bps)	Actual Downstream (Bps)	Actual Upstream (Bps)	1 GB File Down-stream Transfer (Hr)	1 GB File Upstream Transfer (Hr)
ADSL	Mid-range, consumer	256,000	90,000	27,840	9,788	10.7	30.5
ADSL	Mid-range, consumer	256,000	128,000	27,840	13,920	10.7	21.4
ISDN	Typical, consumer	128,000	128,000	16,000	16,000	18.6	18.6
ADSL	High-end, consumer	640,000	256,000	69,600	27,840	4.3	10.7
ADSL	Low-end, small business	640,000	272,000	69,600	29,580	4.3	10.1
ADSL	Mid-range, small business	640,000	644,000	69,600	69,160	4.3	5.0
ADSL	High-end, small business	960,000	816,000	104,400	88,740	2.9	3.4
ADSL	Enterprise	1,200,000	1,100,000	130,500	119,625	2.3	2.5
ADSL	Enterprise	4,400,000	1,100,000	478,500	119,625	0.6	2.5
ADSL	Enterprise	7,100,000	1,100,000	772,125	119,625	0.4	2.5
ADSL	Max-speed	9,000,000	3,000,000	670,000	326,250	0.3	0.9
FTTH	Case-study (Palo Alto)	7,100,000	4,400,000	887,500	550,000	0.3	0.5
CATV	Max-speed	10,000,000	10,000,000	1,250,000	1,250,000	0.2	0.2

FIG. 1

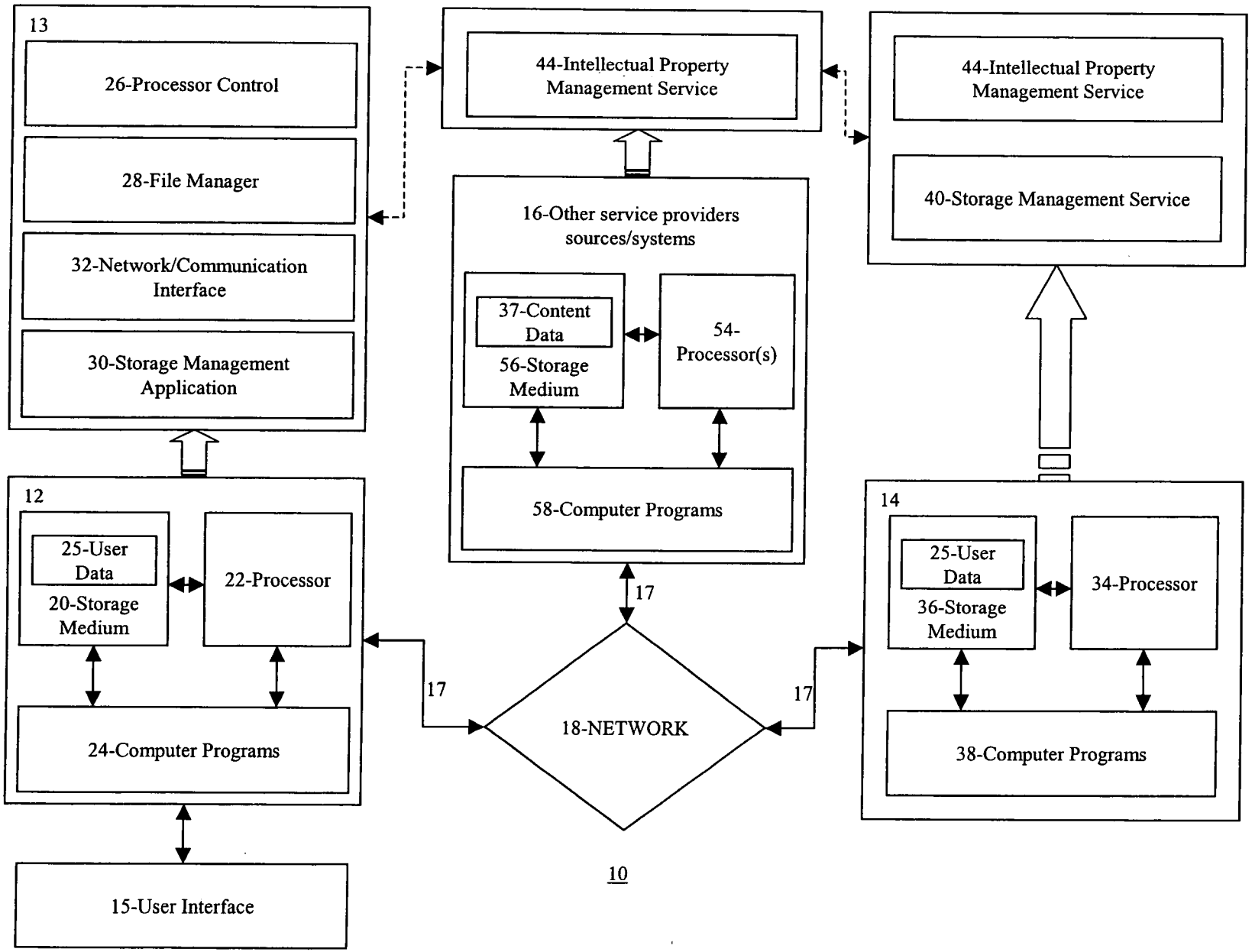

13
26-Processor Control
28-File Manager
32-Network/Communication Interface
30-Storage Management Application
44-Intellectual Property Management Service
16-Other service providers sources/systems
37-Content Data
56-Storage Medium
54-Processor(s)
58-Computer Programs
44-Intellectual Property Management Service
40-Storage Management Service
12
25-User Data
20-Storage Medium
22-Processor
24-Computer Programs
17
17
18-NETWORK
17
14
25-User Data
36-Storage Medium
34-Processor
38-Computer Programs
15-User Interface
10

FIG. 2

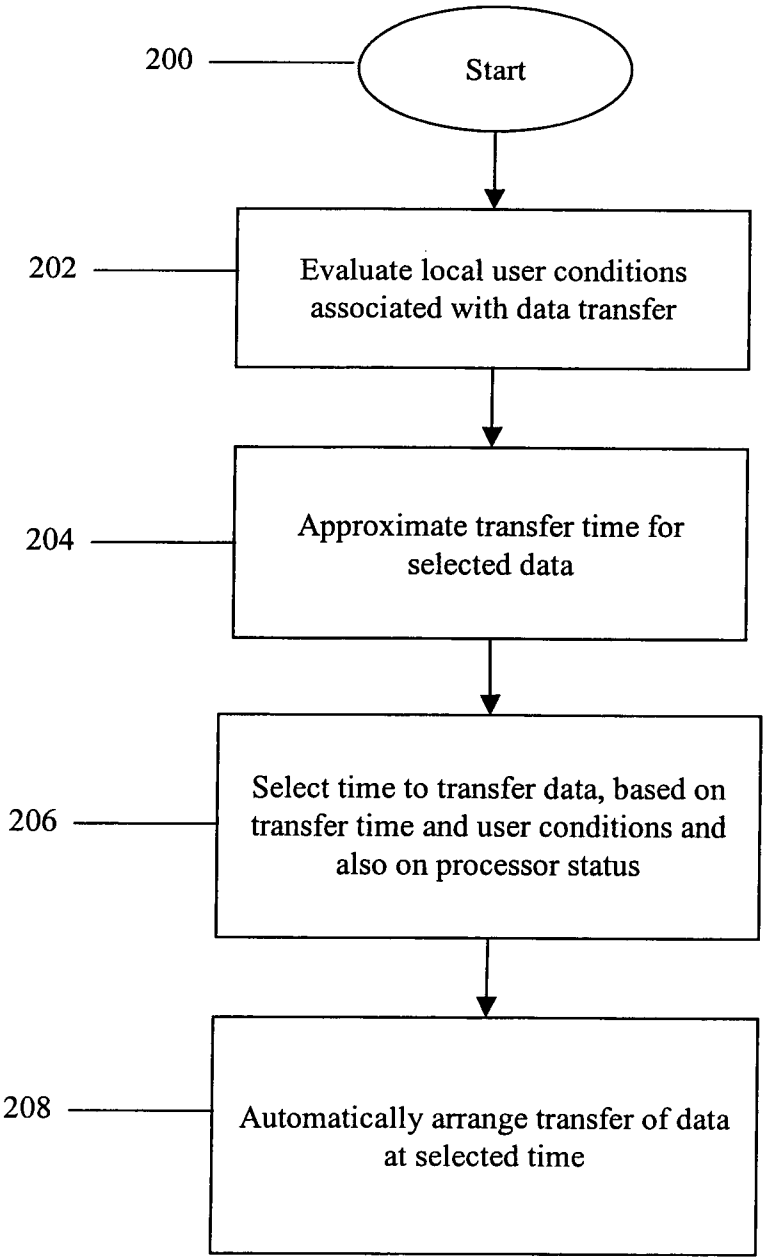
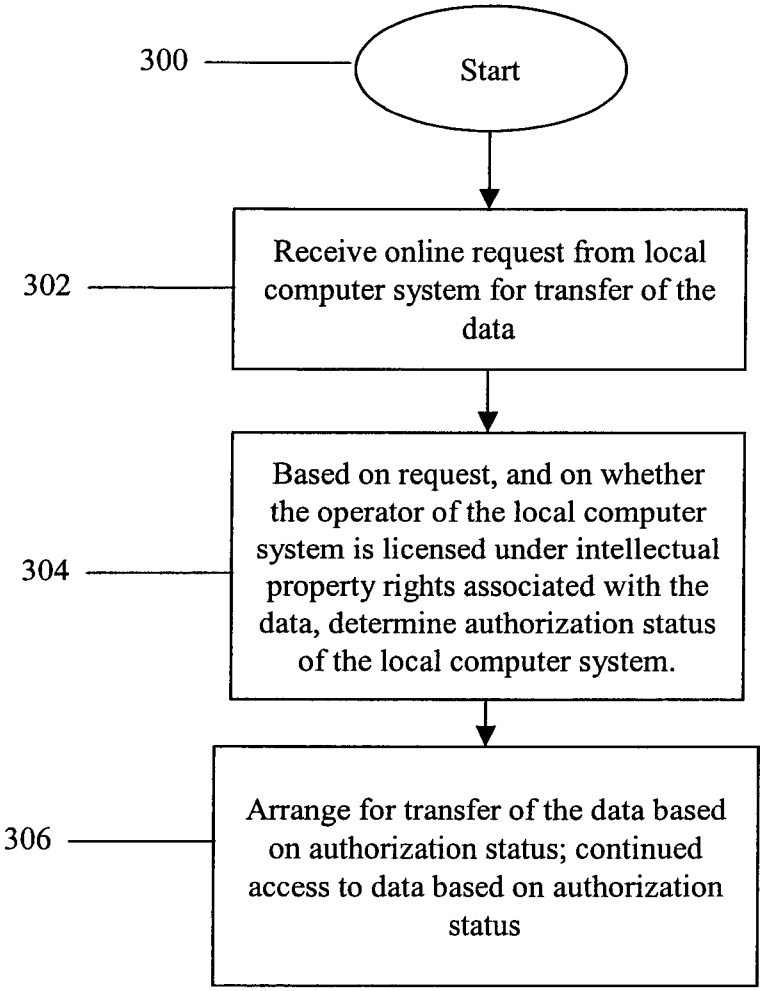

200
Start
202
Evaluate local user conditions associated with data transfer
204
Approximate transfer time for selected data
206
Select time to transfer data, based on transfer time and user conditions and also on processor status
208
Automatically arrange transfer of data at selected time

FIG. 3


300
Start
302
Receive online request from local computer system for transfer of the data
304
Based on request, and on whether the operator of the local computer system is licensed under intellectual property rights associated with the data, determine authorization status of the local computer system.
306
Arrange for transfer of the data based on authorization status; continued access to data based on authorization status